

REMARKS

The Office Action mailed June 24, 2009, has been received and its contents carefully noted. Claims 1-14 were pending. Claims 1-14 were rejected. By this Response, claims 1, 2, 3, 5, 7-10 and 12-14 have been amended to identify the zinc oxide as "pyrogenically produced". Claim 11 was amended to correct a spelling error. Support may be found in the specification. No statutory new matter has been added. Therefore, reconsideration and entry of the claims, as amended, are respectfully requested.

Acknowledgement of the claim for priority under 35 U.S.C. 119 is noted and receipt of the certified copies of the priority document is noted with appreciation.

It is assumed that the rejection based on Mitchnick et al. together with Ettlinger et al. in view of Anderson et al. has been withdrawn in light of the new ground of rejection. The Examiner is thanked for its withdrawal.

Rejection under 35 U.S.C. 103(a)

The Examiner rejected claims 1-14 under 35 U.S.C. 103(a) as being unpatentable over Kerner (US 20020168524) in view of Shimohata (JP 2003292790).

Kerner et al. teaches a surface modified, pyrogenically produced oxide doped by aerosol. Numerous silanes are disclosed as surface modifying agents. See paragraphs [0006]- [0118]. Zinc oxide is mentioned as a candidate oxide but is not exemplified. See Paragraph [0131]. Aluminum, cerium, potassium and noble metals are mentioned as dopants. See paragraph [0128], [0133] and [0137]. Uses are mentioned for the silanized products are mentioned in paragraphs [0139]-[0147]. None are exemplified. It is stated in paragraph [0148], "As a result of the surface modification the products in accordance with the invention can be worked in more rapidly and in higher concentration into organic systems such as, e.g., polyester resin."

Shimohata et al. teaches the addition of carbon black coated silanized zinc oxide particles having an average particle diameter of 0.01 to 10.0 to a resin composition to improve mechanical strength, light resistance and aging. Carbon black has a role as a pigment See

paragraph [0087].

A reference to Anderson et al. does not appear in the statement of rejection but is relied upon and discussed in the body of the rejection. Clarification is requested as to its role.

Anderson et al. teaches cosmetic compositions for the protection of keratinous tissue against environmental factors such as smoke, smog and UV radiation. The compositions have as an essential antioxidant: hesperetin, tetrahydrocurcumin, tetrahydrodemethoxycurcumin or tetrahydrobisdemethoxycurcumin. In col. 4, a sun screen formulation is taught. Titanium dioxide and zinc oxide are mentioned as ingredients. The nature of these oxides, e.g. silanized, BET, etc. are not discussed.

The claimed BET value does fall within the Kerner et al. numeric range of 5 -600 m²/g but the zinc oxide of the claims is not Kerner et al.'s doped pyrogenically produced metal oxide to which the range pertains. It is not seen how this overlap in ranges for a different chemical entity gives rise to a *prima facie* case of obvious for a specific zinc oxide adopted for a specific sun screen/cosmetic unique use. It is not clear why one would "remove" the dopant material from the taught compositions. Further, the "removal" of the dopant would bar reliance on the doctrine of inherency to establish the reasonable expectation of a characteristic's presence.

Shimohata et al. appears to be directed to a reinforcing filler for resins. The exact role of carbon black other than as a pigment is not readily apparent. A cosmetic use for the Shimohata et al. composition is not taught. It is not clear why one looking at its actual teachings would adopt it for a cosmetic use. It is not seen how the teaching renders the claimed carbon content obvious in a cosmetic application. A particle size suitable for a reinforcing filler use does not suggest its suitability for a sunscreen formulation application. (This would be equally true of zinc oxide shapes.) Further, why would one discount the carbon black coating teaching, which appears essential to Shimohata et al. resin application?

Anderson et al.'s teachings do not address the deficiencies noted above for Kerner et al. Why is the dopant "removed"? Why is zinc oxide selected? Kerner et al. do not specify zinc

oxide use in a sunscreen formulary or cosmetic composition. It merely mentions it as a candidate for silanization. It is presumed that its mention is merely for the existence of ethylhexylmethoxycinnamate in a sunscreen formulary and a suggestion of its inclusion would have been obvious if one desired its function and need in a formulary.

Withdrawal of the rejection is respectfully requested. A proper *prima facie* case of obviousness has not been established. The teachings are incomplete. It is not clear why the references would be combined. There is no problem existing in a reference for which another reference teaches a solution. Here one reference is directed to a resin composition, another is directed to a sunscreen formulary and the third is directed to improving “solubility” of a hydrophilic material in an organic phase. The mere fact that a technology or a material exists does not establish its application or use obvious.

Should the Examiner be of the opinion that a *prima facie* case exists, attention is direct to the experimental results shown in the specification., synergism in terms of SPF values are shown on pages 26-34 when the claimed silanized zinc oxide is used with octocrylene (OC), ethylhexyl methoxycinnate (OMC), phenylbenzimidazole sulfonic acid (PISA) or bis-ethylhexyloxy methoxyphenyl triazine (BEMT), respectively. The criticality of the zinc oxide product can be seen from comparative examples 3 (excess air) and 4 (no nucleation zone) compared to the products of the invention, examples 1 and 2. See Table 2 on page 24.

Therefore, Applicants respectfully urge that the claims, as amended, are unobvious and the rejection under 35 U.S.C. 103(a) should be withdrawn.

Request for Interview

A telephonic or an in-person interview is respectfully requested should there be any remaining issues.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Therefore, it is respectfully requested that the Examiner reconsider the presently outstanding rejection and that it be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. 1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300, Attorney Docket No. 032301.443.**

Respectfully submitted,
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